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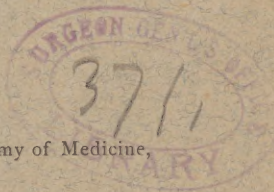
*presented by the author*  
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CINCINNATI, O.

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CASE OF PERSISTENT TINNITUS  
AURIUM RELIEVED BY THE  
REMOVAL OF A NASAL OB-  
STRUCTION.

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By MAX THORNER, M.D.,

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Among the minor ailments which we meet with in our daily practice, none is perhaps so distressing to the patient as the hearing of subjective noises. They are the complaint, in many cases of acute or chronic ear diseases, that causes the patients first to consult a physician; and while it is true that, not infrequently, and especially in the first class of affections (the acute ones), an appropriate treatment succeeds more or less readily in relieving the patients from these and other symptoms, it is, nevertheless, an undeniable fact that in not a small number all our efforts are unavailing. The fate of such patients is a very sad one. After numberless trials to be relieved by physicians, they generally fall a victim to quacks, or to advertised nostrums; and finally, discouraged, they abandon every hope. It is not rare by any means that they become despondent and



melancholic; and insanity is stated on good authority to be occasionally caused by the never-ending noises in the ears of the sufferers.

For this reason I thought the following case of persistent tinnitus aurium worthy of your notice, because of the favorable result I obtained from a procedure from which I had expected little.

Mr. Henry H., æt. 24, consulted me January 23d, 1888, on account of noises in his ears, of a most troublesome character. For the past five years he had noticed a slightly increasing deafness in both ears, associated with hissing and buzzing sounds. The latter had been constantly increasing, until, at the time spoken of, they had become almost unbearable. The right ear was decidedly worse than the left one.

*Stat. præ.* Hearing was in the right ear for the watch  $\frac{4}{48}$ , for the voice 2 feet; in the left ear for the watch  $\frac{10}{48}$ , for the voice 8 feet. The test with the tuning-fork showed bone conduction to be good on both sides. Both drums were slightly depressed and dull in appearance; the short processes were somewhat prominent, and the shining spots shortened.

There was a well-developed post-nasal catarrh. The left nasal fossa was exceedingly narrow; the mucous membrane covering the turbinated bones was hypertro-



phic and congested. The septum was partially thickened and S-shaped, there being a deviation towards the right in the anterior part, and towards the left in the posterior part; and I experienced considerable difficulty in introducing a catheter into the left Eustachian tube, after which the air passed, though not very freely, into the middle ear.

The right nostril was entirely obstructed by what appeared to be a membranous covering. A webfoot-like membrane, as it were, apparently consisting of a duplication of epidermis, closed more than three-quarters of the upper and lateral part of the entrance to the nose; and the remainder of the opening was completely occluded by a portion of the deviated septum, which came in close contact with the free edge of the membrane. The obstruction was so complete that the right nostril was not permeable to air. The introduction of a catheter into the right nostril being entirely out of the question, I tried to inflate the right ear according to Politzer's plan, and succeeded, though with some difficulty. There was, no doubt, a swelling of the lining of the Eustachian tube present.

Inquiry developed the fact of the patient, when a boy, having been struck in the face by the hoof of a horse. The

injury received then had resulted in the deformity above described.

I proposed the removal of what I regarded as a simple membranous obstruction of the right nostril, in order to be able to catheterize the right Eustachian tube. The patient, however, refused every cutting operation. The best I could do was to catheterize the left Eustachian tube, and to inflate the right one according to Politzer's plan, treating at the same time the naso pharyngeal catarrh. But no improvement was noticeable, after several weeks' treatment, in regard to the right ear, whilst the left ear became less troublesome. During the following five months I tried a number of applications which are used advantageously at times in cases of this kind. I made inflations of the fumes of sulphuric ether, of the iodide of ethyl, of camphor dissolved in tincture of iodine, etc.; I employed rarefactions and condensations<sup>4</sup> of the air in the external auditory canal; and I used for a while Lucæ's pressure-probe. In spite of all these procedures no permanent improvement resulted. Having exhausted all other resources, I proposed once more removing the obstruction of the right nostril, with the view to treat the right Eustachian tube directly by means of a catheter. The patient, having seen that thus far every treatment had failed to

relieve the buzzing noises in his right ear, gave his consent.

On June 6th, 1888, with the kind assistance of Dr. L. J. Krouse, to whom I am also indebted for the sketch of the nose I here present, I excised the membrane occluding the right nostril. It was, however, not a thin duplicature of the integument, as I had expected, but a hard, partially cartilaginous structure of considerable thickness.

I found, after the wound had healed, that this operation did not yet permit of the introduction of a catheter, the deviation of the septum extending so far into the lumen of the right nostril as to obstruct the same almost entirely. I therefore performed, on the 16th of July, a second operation, in the presence and with the assistance of Dr. J. M. Thorpe. This time I straightened the septum by a slightly modified Roberts' operation. The success of the operation was complete, and after an additional removal, with the chisel, of a small spur projecting from the lower border of the septum, the lumen of the right nasal cavity was wide enough to allow of nasal respiration and of the introduction of a catheter. I then began to inflate the right ear by means of the catheter, but had opportunity to do it only four times, with but slight improvement as regards the tin-

nitus aurium. For the patient had expected to be immediately relieved from the principal source of his complaints, the never-ceasing noises; and when he found that this was not the case he was discouraged, and discontinued treatment. This was August 10th, 1888..

Not a little was I surprised when, last Tuesday, March 9th, he appeared again in my office. He considered it his duty, he said, to inform me that, from the time he had been operated upon, he had been gradually improving. The intensity of the noises in his right ear had been gradually but steadily decreasing all the time, so that now he was only occasionally annoyed, and even then it was nothing compared to the former trouble.

Upon examination I found that the condition of his ear had not much changed. The appearance of the drum in both ears was the same as when he came under my observation. The distance at which he could hear my watch was also not different from former examinations. The condition of his naso-pharynx was better than when he presented himself first for treatment, more than a year ago. But this improvement had already taken place as a result of treatment at the time when he discontinued his visits.

There is no reasonable doubt in my



mind that the relief from the obstinate tinnitus aurium was, in the first place, due to the removal of the nasal obstruction.

The causes of tinnitus aurium are often so obscure that they cannot be ascertained in every case with certainty. In this case any primary labyrinthine disease could be excluded. The patient was a healthy man in every other respect; had never had syphilis, and was of moderate habits. A disturbance in the mechanism of transmission of sound, by an increased tension in the middle ear, was probably responsible for the greater part of the trouble. I base my conclusions on the appearance of the drum-head, and on the fact that bone conduction was as good, if not better, in both ears than aerial conduction. But, on the other hand, both Eustachian tubes were moderately patent, and inflations into the right ear did not improve the condition.

If we, therefore, are not inclined to consider the tinnitus aurium in the right ear as a reflex phenomenon, caused by the complete obstruction of the right nasal cavity, and relieved by the removal of the same, the change may be attributed to the following facts: The obstruction of the right nostril kept the naso-pharynx in a condition of constant inflammation and irritation, in which the mucous lining of the right Eustachian tube participated by

contiguity. After the operation this condition of irritation ceased, the right nostril was again open for breathing and drainage of nasal secretions, which heretofore had to make their exit to the pharynx; the circulatory conditions were at once altered; and these changes brought about an improvement of the condition of the right Eustachian tube, which finally resulted in relieving the most distressing symptom of the patient.

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